

## CLAIMS:

1. An electronic communication system (100; 100') for a progressive movement means, having
- at least one base station (10) arranged in the progressive movement means and
  - 5 - at least one carrier station (60), in particular a movable carrier station, that is designed to exchange data signals with the base station (10),
    - where the base station (10) has
      - at least one coupling electrode (12),
      - at least one ground electrode (14) and
      - 10 -- at least one processing circuit (20) for transmitting and/or receiving the data signals, formed by a voltage between the coupling electrode (12) and the ground electrode (14), to and from the carrier station (60) and
        - where the carrier station (60) has
          - at least one coupling electrode (62),
          - 15 -- at least one ground electrode (64) and
          - at least one processing circuit (70) for receiving and/or transmitting the data signals, formed by a voltage between the coupling electrode (62) and the ground electrode (64), from and to the base station (10),
    - where the coupling electrode (12) of the base station (10) and the coupling
    - 20 electrode (62) of the carrier station (60) are coupled to one another during operation via a coupling path (50) for the transmission of the data signals, which coupling path (50) has at least one capacitive connection provided over at least one electric field,
    - where the ground electrode (14) of the base station (10) is connected
    - electrically or capacitively during operation to an electrical ground body of the progressive
    - 25 movement means and
      - where the ground electrode (64) of the carrier station (60) is connected
      - electrically or capacitively during operation to the electrical ground body of the progressive movement means,

characterized in that the carrier station (60) is designed as in each case at least one sensor unit,

- which is assigned to at least one wheel or tire (90) of the progressive movement means and

5                   - which is designed to detect and/or determine at least one characteristic parameter of the wheel or tire (90), such as for example the air pressure and/or the temperature and/or the wear of the wheel or tire (90).

2.                   A communication system as claimed in claim 1, characterized in that the  
10 carrier station (60), in particular the coupling electrode (62) of the carrier station (60),  
- is spatially assigned to the outer case (92) and/or the valve (96) of the wheel  
or tire (90) of the progressive movement means and  
- is electrically insulated from the rim (94) of the wheel or tire (90) of the  
progressive movement means.

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3.                   A communication system as claimed in claim 2, characterized in that the  
carrier station (60) and/or the coupling electrode (62) are integrated in the valve (96) of the  
wheel or tire (90).

20 4.                   A communication system as claimed in at least one of claims 1 to 3,  
characterized in that the carrier station (60) and the coupling electrode (62) are designed as a  
single component and/or as a one-piece module.

5.                   A communication system as claimed in at least one of claims 1 to 4,  
25 characterized in that the coupling electrode (12) of the base station (10)  
- is spatially assigned to the wheel guard (40) of the progressive movement  
means and  
- is electrically insulated from the wheel guard (40).

30 6.                   A communication system as claimed in at least one of claims 1 to 5,  
characterized in that the processing circuit (20) of the base station (10) has  
- at least one inductance (22),  
- at least one capacitance (24) and  
- at least one driver circuit (26) in the form of at least one modulator,

which are preferably connected to one another in series,

- where the coupling electrode (12) of the base station (10) is preferably connected at the connection point (28) between the inductance (22) and the capacitance (24) and/or

5                   - where the ground electrode (14) of the base station (10) is preferably connected at the connection point (30) between the capacitance (24) and the driver circuit (26).

7.               A communication system as claimed in at least one of claims 1 to 6,  
10               characterized in that the processing circuit (70) of the carrier station (60) has

- at least one inductance (72) and

- at least one capacitance (74),

which are preferably connected to one another in parallel as a resonant circuit, and also

- at least one driver circuit (76) in the form of at least one demodulator,

15               - where the coupling electrode (62) of the carrier station (60) is preferably connected at the connection point (78) between the inductance (72), the capacitance (74) and the driver circuit (76) and/or

20               - where the ground electrode (64) of the carrier station (60) is preferably connected at the other connection point (80) between the inductance (72), the capacitance (74) and the driver circuit (76).

8.               A base station (10) for an electronic communication system (100; 100') as claimed in at least one of claims 1 to 7.

25   9.               A sensor unit for an electronic communication system (100; 100') as claimed in at least one of claims 1 to 7.

10.              The use of at least one electronic communication system (100; 100') as claimed in at least one of claims 1 to 7, in particular of at least one sensor unit (60) as  
30              claimed in claim 9, for detecting and/or determining at least one characteristic parameter, such as for example the air pressure and/or the temperature and/or the wear, of at least one wheel or tire (90) of a progressive movement means.